Attachment A
Conditions and Comments for EPA Approval of the FSP and QAPP

Subject to the following conditions and comments (including EPA approval of additionally required submissions, as identified below), EPA approves the *Draft Field Sampling Plan, Soil Investigation for Historical Stormwater Pathway - South, Ecology Control Industries Property, 20846 South Normandie Avenue, Torrance California 90502* (FSP), and the *Draft Quality Assurance Project Plan, Soil Investigation for Historical Stormwater Pathway - South, Ecology Control Industries Property, 20846 South Normandie Avenue, Torrance California 90502* (QAPP).

The FSP and QAPP were developed based on work plans prepared for EPA by CH2M Hill and dated March 2006: *Draft Field Sampling Plan, Soil Investigation for Historical Stormwater Pathway – South, Montrose Chemical Superfund Site*, and *Draft Quality Assurance Project Plan, Soil Investigation for Historical Stormwater Pathway–South, Montrose Chemical Superfund Site.* These EPA plans are hereafter referred to as the EPA FSP and QAPP for the Study Area. The EPA Study Area consists of portions of the ECI property and seven (7) adjacent residential properties within or near the EPA-interpreted extent of the historical stormwater pathway.

General Comments

1. In the FSP and QAPP, Montrose has proposed conducting an initial field study (a limited sampling effort) intended to assess if pesticides and/or PCBs remain present in soils at the ECI property within the EPA-interpreted extent of the historical stormwater pathway. This work represents only a portion of the work EPA has determined to be necessary to characterize the EPA Study Area. EPA will be conducting sampling at the residential properties within the EPA Study Area in July and August of 2006. Based on the findings from both the ECI Property and the residential properties, EPA will determine if additional work is required for any portion of the Study Area.

   However, should hazardous substances be detected in soil samples taken at the ECI Property, at concentrations exceeding the criteria presented in the FSP, QAPP and the conditions of this letter (see below), additional sampling will be required at the ECI Property to further characterize the nature and extent of those detected contaminants. EPA understands and expects that Montrose will conduct such additional sampling at the ECI Property, if needed.

2. The decision rules presented in the FSP and QAPP are not consistent within those documents, and are presented in a narrower form than those used in the EPA FSP and QAPP for the Study Area. To provide consistency throughout the EPA Study Area, decision rules addressing detected concentrations, including concentrations exceeding twice the applicable criteria, are established below. Additional sampling at the ECI property will be conducted under the following circumstances to further characterize the nature and extent of contamination:

   a. DDT – For each sampling depth interval, if the 95% upper confidence on the mean concentration, or the upper 90^{th} percentile of the observations exceed the criterion of 10 ppm DDT, then the sampling depth interval (layer) will be considered contaminated, and additional sampling will be conducted by Montrose, increasing the number of transects and/or the lateral extent of the transect sampling, as required by EPA. Additionally, if discrete (sample specific) data results exceed two times the criterion of 10 ppm DDT (i.e., exceed 20 ppm), Montrose will conduct additional sampling within the ECI property as required by EPA to delineate those areas.

b. Other hazardous substances - If, for any hazardous substances positively detected, either (a) the 95% upper confidence on the mean concentration of sampling data for a given sampling depth interval or (b) the upper 90th percentile of the observations for a given sampling depth interval is found to exceed the corresponding EPA Region 9 Preliminary Remediation Goal (PRG) for residential exposure, or the California DTSC soil screening values, EPA may require additional sampling within the ECI property to delineate the nature and extent of those substances, and the chemical(s) may be identified as a chemical of potential concern for subsequent work (e.g., human health risk assessment etc.).

3. The FSP and QAPP include figures showing a 1947 aerial photograph to illustrate the historical stormwater pathway (FSP Figure 3 and QAPP Figure 5). While the 1947 aerial photograph illustrates the extent of the historical stormwater pathway at that point in time, EPA has noted that this figure depicts the extent of the historical stormwater pathway during the year having the lowest cumulative precipitation for the years from 1932 to 2004. In the FSP (Figure 6) and QAPP (Figure 8), the western boundary of EPA's interpretation of the lateral extent of the historical stormwater pathway is shown by a blue dashed line; the eastern edge, located beyond (east of) the ECI property boundary, is not shown. (PA's interpretation of the lateral extent of the historical stormwater pathway, included in the EPA FSP and QAPP for the Study Area, was developed using information from 1928 to 1965 (15 aerial photographs) together with precipitation data for that time period.

4. The FSP and QAPP do not address geotechnical sampling. EPA may determine that such sampling is needed in the future to support any additional response activities (removal or FS work) in the Study Area.

Comments on the Draft FSP for the ECI Property

5. Section 3 - Benchmarks for Characterization – The FSP and QAPP propose using 10 mg/kg as a benchmark for defining where DDT contamination is sufficiently defined, and for all other constituents, the chemical-specific EPA Region IX Preliminary Remediation Goals (PRGs) dated October 2004 are proposed as benchmarks for sufficient characterization. EPA requires that residential PRGs be used as benchmarks for characterizing the ECI property (as opposed to the less protective industrial PRGs), as the likely future use of the property for residential development has already been demonstrated.

   Additionally, the text states "EPA selected 10 mg/kg DDT as a site-specific cleanup *standard* for DDT in soil for the 2001-2002 Kenwood Stormwater Drainage Pathway removal action" (emphasis added). EPA selected 10 mg/kg DDT as a site-specific cleanup *level* for soil; a "standard" generally represents a promulgated value.

6. Section 4.2 – Rationale for Number of Samples – Paragraph 2 states "soil will be continuously sampled during drilling of investigation borings, and 8 samples will be composted for analysis from each of the 34 borings located at the main ECI property." Compositing intervals are identified in the text (i.e., soil sampling depth intervals). Soil from more than one depth interval or more than one boring must not be combined or composited as a sample (see also QAPP, Appendix A, DQOs, Step 7.2, (2.1) Design Objective 1).

7. Section 4.2 – Rationale of Number of Samples - For the borings located along the northern sloped embankment, Montrose will use best efforts to achieve the 16 foot target depth, including if necessary, use of drilling equipment intended for sampling on slopes. (This comment also applies to Section 6.2.4, Other Sampling Methods.)

8. Section 5.3 Sampling Schedule - Montrose will prepare and make available to EPA a field schedule specifying borings and samples to be conducted on each day of field activities. This schedule should be updated as needed, and updates made available to EPA within 24 hours of any changes made.

9. Section 6.1 – The FSP includes surveying the proposed boring locations and, following sampling, surveying any changes to those locations. EPA requests that Montrose also survey the corners of the open excavations and the locations of borings sampled by the property owner in 2005 (where clearly identifiable). This additionally requested surveying will support the use of both historic and current data in evaluating conditions at the ECI property.

10. Section 6.2 - The FSP proposes to submit samples to the laboratory in the acetate sleeve liners from direct push sampling. Soil logging of the borings and field screening by OVA are not possible as proposed, as the acetate sleeve will make the majority of the core length inaccessible. Therefore, acetate sleeves should be opened lengthwise to allow the full length of the sleeve to be screened for VOCs, and adequately logged. VOC screening must be done at a rate allowing valid readings of any VOC emissions, and the VOC responses and corresponding depths in the boring must be recorded in field notes and included in the boring logs.

    Additionally, duplicate samples (to be submitted to the laboratory in jars following field homogenization and splitting of the sample volume) will be easily distinguishable by the lab from samples in acetate sleeves. Therefore, following field screening activities, all soil samples (acetate sleeve contents) must be transferred to sample jars for submittal to the laboratory.

11. Section 6.2.1 – The FSP proposes to use a 5-foot step-out distance should refusal be encountered while advancing a boring; a maximum of three step-outs per location and a maximum total step out distance of 15 feet from the identified sample location are specified. Step-out distances will be the minimum distance believed necessary to clear the encountered obstruction, or a maximum of 5 feet for any given step-out. Additionally, EPA will be contacted immediately if refusal is met three times for a given boring, to discuss subsequent actions.

12. Section 6.2.2, Boring Logs - To provide a permanent record and assist in the preparation of soil logs and development of cross sections, each and all soil cores must be photographed during the logging procedure. Additionally, any indications of the morphology of the historic ditch bed (e.g., hydric soils), or other unusual soil characteristics (e.g., staining) must be clearly noted in the field logs, and EPA oversight personnel called over to observe such indicators.

13. Section 6.2.3 –The FSP proposes that the laboratory will conduct the homogenization of samples prior to analysis. Duplicate samples and EPA oversight split samples will also require field homogenization to prepare those samples. EPA expects that all samples, including those subject to field homogenization, will be homogenized by the laboratory prior to analysis. Additionally, prior to the start of field activities Montrose will provide to EPA for review and approval the sample homogenization protocols to be used by the laboratory.

14. Section 6.2.5 - Hydrated bentonite chips may also be used for borehole abandonment.

15. Section 6.3 – EPA has received the health and safety plan (HASP) for this proposed effort (dated June 19, 2006). EPA will review that document, and communicate any comments to Montrose prior to commencement of field activities.

16. Section 6.6, Sample Documentation –Daily records must include descriptions of and reasons for any deviations from the FSP, QAPP, and EPA's conditional approval requirements. Additionally, any and all sample documentation (e.g., field notes, photographs, etc) must be made available to EPA upon request.

17. Section 6.7.1 - Duplicate Samples – If sample volume is inadequate to prepare Quality Control (QC) samples (e.g., duplicate or split samples), the FSP proposes to collect additional sample volume in successive pushes or hand auger collection. Such action would not be consistent with the continuous sampling approach used in the FSP. While EPA anticipates that the cores for the proposed sampling intervals will have adequate sample volume to generate QC samples, if additional sample volume is needed, the boring diameter will be increased and the entire volume of soil field homogenized prior to splitting; sample volume must not be increased by successive pushes.

    Additionally, a table identifying duplicate samples (borings and sampling depth intervals) must be submitted to EPA for review and approval prior to initiating field activities.

18. Section 6.7.3 - Laboratory QC Samples – Sample locations and depth intervals for matrix spike/matrix spike duplicate (MS/MSD) samples have been proposed in the FSP (Table 6). However, all proposed MS/MSD samples are from the 5- to 8-foot or 20- to 24-foot depth intervals. Boring and sampling intervals for MS/MSD samples should be equally dispersed across depth intervals or from randomly selected depth intervals. A revised proposal for depth intervals to be targeted for MS/MSD samples must be submitted to EPA for review and approval prior to initiating field sampling.

19. Figure 6 – Proposed Soil Boring Locations in Figure 6 are not numbered; therefore, locations of quality control samples (e.g., duplicate samples) and EPA requests for split samples cannot be correlated to a specific location. A revised version of Figure 6 with identifiers for sample locations must be submitted to EPA for review and approval at least 7 business days prior to the start of field activities.

20. Table 4 – The table does not clearly distinguish between the 4 boring locations along the northern slope of the ECI property (to be advanced to 16 feet below ground surface) and the 34 boring to be advanced in the ECI yard (to be advanced to 24 feet below ground surface), and incorrectly identifies the total sampling depth of the borings. EPA understands and expects that the 34 borings advanced in the ECI yard will be advanced to 24 feet bgs, resulting in 8 sampling depth intervals per boring, and the 4 borings along the northern slope of the ECI property will be advanced to 16 feet bgs, representing 6 sampling depth intervals per boring.

21. Table 6 - Sample containers are identified in the table as: 8 oz glass jars, 16 oz glass jars, and acetate sleeves. However, a 1.4 Liter sample container or larger will be needed to contain the full volume of soil from a 3- or 4-foot sampling depth interval (based on volume estimates for a 1.5 inch diameter sleeve). The adequacy of sample containers must be verified, and EPA informed of the actual sample containers to be used, prior to the start of field activities.

Comments on the Draft QAPP for the ECI Property

22. Section 2 - Project Organization – Mr. Paul Sundberg and Mr. Brian Dean are both identified as primary contacts for EPA. EPA will communicate in writing to both representatives. However, based on other correspondence with Montrose, EPA will primarily communicate with Mr. Brian Dean regarding matters related to the FSP and QAPP activities, such as scheduling and technical issues. Additionally, Montrose representatives will consult with the EPA RPM prior to Montrose taking corrective actions regarding any identified QA problems or deficiencies.

23. Section 3 - To ensure that the specifications of the QAPP are fully implemented by the laboratory, Montrose will provide the following to EPA for review and approval, prior to initiating field activities:

    a. The statement of work to be issued to the laboratory. The statement of work should include the specifications given in QAPP Sections 2, 3 and Appendix B, and the requirements specified in this letter (e.g., performance specifications). Methods used and QA/QC procedures must be consistent with EPA methods that would be used at the Montrose Site for the purposes proposed, and be approved by EPA.
    b. All of the laboratory's performance evaluation (PE) sample results for the past two years for the methods to be performed under this program. PE sample results for regulatory programs should be included.
    c. Documentation of the laboratory's QA program, including but not limited to: personnel qualifications, equipment and material specifications, and use of methods and analytical protocols for (a) the chemicals of concern, (b) in the media of interest and (c) within detection and quantification limits consistent with both QA/QC procedures and the QAPP DQOs (as conditionally approved).
    d. Assurances that the laboratory has a documented Quality Assurance Program which complies with ANSI/ASQC E-41994, "*Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs*,"(American National Standard, January 5, 1995) and "*EPA Requirements for Quality Management Plans* (QA/R-2)" (EPA/240/B-01-002, March 2001) (or equivalent documentation as determined by EPA).

    Additionally, prior to the start of field activities, EPA will submit a pre-qualification PE sample to the laboratory for analysis. The analytical package for this sample must be provided to EPA in the format required to meet the specifications and requirements of the Draft FSP and QAPP for ECI. Montrose will provide a schedule for submittal of these QA packages (laboratory qualifications and PE sample results) to EPA for review and approval seven (7) days prior to the start of field activities.

24. Section 3.3.4 – Corrections to Documents –Sample documentation (e.g., chain-of-custody and laboratory custody records, field notebooks, etc.) will be made available to EPA upon request.

25. Section 3.9 - Data Management - Data (preliminary and final) will be made available to EPA in an agreed-upon electronic format. Montrose specifications to the lab for electronic deliverable format will be provided to EPA prior to the start of field activities, for review and comment.

26. Section 4.1 - Assessment and Response Actions - EPA or their designee may audit the laboratory at any time before, during, and after the work associated with the completion of tasks in this FSP and QAPP. Such audits may be onsite or remote by requesting information from the lab. EPA must have access at all times to laboratory personnel, equipment and records, sample collection, transportation and analysis, and other items as requested.

27. Section 5.2.1 – A 'performance criteria' table presenting overall assessment criteria of laboratory performance, in terms of PARCC (precision, accuracy, representativenes, completeness, and comparability) parameters must be submitted to EPA for review and approval seven (7) days prior to the start of field activities. This table must be included in the laboratory statement of work required in Comment 23 of this letter.

28. EPA intends to conduct Level III data validation of at least one Sample Delivery Group; the actual sample delivery group will be determined at a later date. Montrose must provide all necessary information from the laboratory analyses to EPA, for completion of that validation.

Data Quality Objectives, Appendix A to the Draft QAPP for the ECI Property

29. Step 2.1(a) – Identify the Principal Study Question – Principal Study question #1 is to characterize the nature and extent of soil contamination. However, as describe in General Comment 1, the work proposed in this FSP and QAPP is an initial evaluation intended to determine if pesticides and/or PCBs are present in soil. As such, the proposed sampling may not be adequate to characterize the nature and extent of any contamination detected, and additional sampling would be required to determine the horizontal and vertical extents of that contamination. This clarification also applies to all steps of the DQOs that refer to characterizing the nature and extent of contamination.

30. Step 2.3(b) - Support an HHRA - The text states "If the calculated human health risks are acceptable and require no action for the ECI Property, then a decision of No Further Action (NFA) will be proposed." EPA does not agree with this statement. A determination of no further action is a regulatory determination based in part on risks to human health and the environment and the relevant provisions of the NCP (40 C.F.R. Part 300). If criteria identified in this FSP and QAPP (as conditionally approved in this letter) are not exceeded, and calculated human health risks for soil samples gathered for this effort do not, in EPA's view, require additional response actions (including but not limited to additional sampling), then no further sampling would be required of Montrose within the interpreted extent of the historical stormwater pathway at the ECI property as part of this sampling effort.

31. Step 2.3(d) - Support a Feasibility Study - The text states "If, however, current (or post-removal action) concentrations indicate long-term human health risks are at acceptable levels for the ECI Property, then an NFA determination can be proposed." As stated in the preceding comment, if criteria identified in the FSP and QAPP (as conditionally approved in this letter) are not exceeded, and calculated human health risks for soil samples gathered for this effort do not, in EPA's view, require additional response actions (including but not limited to additional sampling), then no further sampling would be required of Montrose within the interpreted extent of the historical stormwater pathway at the ECI property as part of this sampling effort.

32. Step 6 – Summary /Interpretation of Available Soil Boring Data – The QAPP presents a limited summary of the results and statistical findings associated with data collected from the ECI property in 2005. EPA's analyses show, among other things, that samples with DDT exceeding 10 ppm (the

upper end of the range of regional background values) occurred only within the EPA-interpreted extent of the historical storm water pathway, and that the presence of DDT was not correlated by location or concentration to the presence of other pesticides or PCBs.

33. Step 7.2, (2.2) Design Objective 2 , DDT Relationships to Other Organochlorine Pesticides – A table for this design objective, presenting the inputs to the decision, the study boundaries and decision rules, etc., was not included in the QAPP. A table presenting the decision point, inputs to the decision, study boundary, etc (similar to Table A-3) must be submitted to EPA for review and approval prior to the start of field activities.

Errata

34. Occasionally, figures and tables are incorrectly cited, including:

    e. Section 1, Paragraph 1, and Step 1.3 of the DQOs in Appendix A - The location of the ECI property is shown in Figure 3, not Figure 1.

    f. Section 2.1.4.1 – the second bullet should refer to Figure 6 instead of Figure 8.

    g. Section 3.4 – Table 4 and Table E should be referenced instead of Table 5 and D.

    h. DQO Step 4.2(a) should refer to Figure 8 (not Figure 4) for the extent of the stormwater pathway.

    i. DQO Step 6.1 – the text should refer to Figure 6 (not Figure 5) for the 2005 sampling locations.

35. Section 2.1.3.1 - The Study area is located in the unincorporated area of Los Angeles County, east of, but not in, the City of Torrance.

36. Section 2.2.1 - Both the first and second bullets describe areas within the EPA Study Area (not only the first, as indicated).

37. Section 5.1 - Tier 2 data validation is described in Section 5.2.1, instead of Section 4.2.1.

38. Section 5.2.1 – Reference to the *Revised* QAPP is erroneous (emphasis added). This is a draft document.